

PRO Water Equity, Inc.

Paso Robles Groundwater Basin Overliers for Water Equity

www.prowaterequity.org
info.prowaterequity@gmail.com
www.facebook.com/ProWaterEquity
P.O. Box 255, Templeton, CA 93465

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Eric Oppenheimer
Director, Office of Research, Planning & Performance
State Water Resources Control Board
1001 I Street, 16th Floor
Sacramento, CA 95814

Via email: eric.oppenheimer@waterboards.ca.gov

We appreciate the opportunity to comment on the Water Boards' discussion draft of the Groundwater Workplan Concept Paper and to add our strong support for this effort.

PRO Water Equity, Inc. is a diverse all-volunteer coalition of Paso Robles Groundwater Basin ("Basin") users who believe in finding a fair way of sharing the groundwater that belongs to all of us. We are supported by winery and vineyard owners, olive growers, other agriculturalists and many rural residents who overlie the basin.

Our supporters and local citizens appreciate having had the opportunity to meet with you. Now you have first-hand documentation of ongoing irrigation projects along with the economic realities that are preventing landowners from making official reports of their well conditions.

We believe that our basin fits your proposed framework for focused attention and assistance and would be an ideal pilot project or case study as a vulnerable high-use basin where thresholds are being exceeded.

In August, San Luis Obispo County adopted an Interim Urgency Ordinance (UO) finding that "*...Based on the recent rates of decline of water levels in the Basin, the reported increase in incidences of well failures within the Basin, and the rate of establishment of new uses dependent on water from the Basin, continuing to allow the establishment of new water-intensive uses within the Basin poses a current and immediate threat to the people, species, and environs that currently depend upon that Basin, and to the public, health, and welfare as a whole.*"

Included below are our comments on two of the five key elements of groundwater management, **Thresholds and Governance and Management**, based upon current conditions in our Basin.

Mission Statement: To promote the health, safety, common good and general welfare of the community by advocating for the stabilization and sustainability of the Paso Robles groundwater basin for the benefit of all overlayers.

Thresholds

If the action at 3.2.2 #2 of your concept paper which would require reporting of groundwater pumping in basins subject to critical overdraft were in place right now, it would solve one of our Basin's major problems.

Resistance to metering, monitoring and reporting requirements is strong, yet without measuring pumping we cannot effectively manage demand.

While municipal pumping is measured, agricultural, rural, and small community/commercial pumping is estimated. Reporting requirements would allow accurate updates to safe yield and deficit pumping calculations each year.

If no state agency has the authority to require metering and monitoring, then advancing this program to the legislature in the next session should be a high priority.

In addition, we support all of the actions listed at 3.2.1 and recommend including our basin in the GAMA Priority program and in the update of DWR Bulletin 118.

To be effective, quantifiable thresholds must be required in both managed and adjudicated basins, and when exceeded must trigger a mandated action. Triggers need to be set well in advance of overdraft since when the event occurs the political pressure from beneficiaries of business-as-usual-pumping can overwhelm local government's ability to act.

The impact of well level thresholds in our basin

Water levels in representative wells are measured by the County in April and October. Results are posted as sub-region hydrographs online.

For the major Basin areas, basin management objectives as measured by the yellow band on regional hydrographs have not been met. The Basin is clearly in overdraft according to established definitions of overdraft with dry and failing wells as a tangible symptom.

Pumping has been nearing or exceeding a 97,700 acre-foot/yr. safe yield threshold set in 2005. However, well level measurements reveal that either the safe yield or the pumping estimates or both are not accurate. The water balance study to be released next month will calculate safe yield using current information, however will use irrigated acres as of 2011. Since 2011, at least 3,000 new acres have been or are being converted.

Even if pumping levels are maintained at or near safe yield, the water supply and public trust resources are at risk absent a buffer to allow for a future of climate change and the wild cards of extreme weather and drought.

The impact of water quality thresholds in our basin

As declining water levels continue in the Basin, the threats to water quality will increase. We need to determine what percentage of the water in storage in the Basin is of poor water quality and establish dedicated wells for ongoing monitoring.

The County has submitted a grant application for preparation of a GIS layer and database by the County Health Agency on historical Basin water quality tests. We should establish standards and oversight for deep wells and practices like the blending of poor quality or geothermal water with good water for irrigation from ag ponds. Application of water high in boron, sodium or chloride to the soil or from ag pond leakage would have the potential for contamination of the Basin.

U.S. Geological Survey studied the Basin last year, but we understand that the report is not yet final. USGS testing of dedicated wells would verify local data so that we operate with a standardized baseline of existing conditions.

Of concern are the deeper wells which could access the Basin's irreplaceable ancient water. These wells can be drilled through the Basin and into the lower quality water in the underlying Santa Margarita Formation or the Monterey Shale. Some local vineyards are reported to have drilled to 1,200 feet. At least one well on Airport road is reported to be at 1,400 feet.

One drilling firm has recently brought a reverse-rotary drilling rig into the area with the capability to drill to a depth of 2,000 feet, much deeper than our local drillers. These wells can cost as much as \$300,000.

If the deep wells are screened through both good quality and poor quality zones, they can allow intermixing of fluids and potential degradation of the higher quality zones. Also, as the water is extracted from these deeper zones, fluids will be drawn in from other locations. In the case of the Santa Margarita Formation, the formation may be recharged by draining from the overlying Paso Robles Formation and/or by upward-vertical gradient from the underlying Monterey Formation, which is likely to be of very poor quality at that depth.

Based on the USGS studies of these deeper zones, these waters can contain high H₂S, boron, sodium, and chloride. These constituents are harmful to human health and agricultural crops, particularly grapevines. Water quality data from these deep wells should be obtained and evaluated. In particular, water produced from new wells that did not fall under the Agricultural Order should analyzed for the applicable constituents.

The use of agricultural reservoirs for mixing of these poor quality waters may result in contamination of the fresh water zones by leakage from these ponds. These large ag ponds also encourage the practice of deep drilling into poor quality water.

On August 25, the Tribune reported that the cost of casing with special anti-corrosion metal alloys can run as much as \$450 per foot just for the casing material, and the very deep wells need the added strength of metal casing. Unless screening is properly done, water from the Santa Margarita Formation could mix with and reduce the quality of the Basin groundwater as these deep wells are pumped. According to the County Department of Environmental Health, they rely on information from the well drillers to ensure that water from a deep well does not leak into and contaminate the upper aquifer.

We understand that the well depth and screened interval information is not always being provided on the Well Drillers' Reports. If that is the case, the County should take enforcement action against that drilling firm. This is an unacceptable situation. Environmental Health not only needs this information, but should be using this information to restrict harmful drilling practices, particularly drilling into these deeper formations.

The absence of subsidence thresholds in our Basin

The only reference to subsidence in the 2011 Basin Management Plan is from page 27:

“ The studies done in the area show that an area three miles northeast of Paso Robles has shown a downward displacement from 0.6 to 2.1 inches (Valentine, D. W. et al., 1997). There is no direct correlation of the measured land subsidence with change in groundwater levels over a long period in time, but some of the areas of land subsidence appear to correspond with areas of significant groundwater level decline between the spring of 1997 and fall of 1997.”

Since 1997, Basin decline has accelerated and especially with the advent of very deep wells will likely continue. Subsidence should be monitored and thresholds established.

This is an active geologic area. Following the 2003 San Simeon earthquake, a large sinkhole opened in the Paso Robles library parking lot. For months, the fumes could be smelled all over downtown and gave people headaches. Effluent was diverted into a leach field then released into the Salinas River until the sinkhole could be closed over.

The summary in the USGS document linked below concludes that “seasonal drawdown of the groundwater results in increased incursion of geothermal water and associated gases”.

- a) mixing of > 20% geothermal water results in Mn (manganese) and Fe (iron) problem
- b) mixing of > 40% geothermal water results in hydrogen sulfide (H₂S) problem
- c) mixing of > 40% geothermal water results in unpotable water (H₂S and ammonium, NH₄)

<http://www.slocountywater.org/site/Water%20Resources/Advisory%20Committee/Submittals/pdf/130206%20USGS%20Geothermal%20Presentation%20Submittal.pdf>

In 1983, studies noted the high boron content of Paso Robles area hot springs, which they believed was derived either from the sands below the Paso Robles formation or from faults that serve as conduits for deeper aquifers.

Governance and Management

First, we support and recommend removal of the artificial distinction between surface and groundwater.

Then, after assessing the difficulties of our situation described below, we ask that you consider using your experience and resources to just simply create a road map to good basin governance. This could be a set of adaptable guidelines showing how a local government can move from documenting the need for management to actually getting it done.

Include an assessment of management structure options and a survey of areas in California where either by adjudication or a management plan you have seen measureable success in balancing demand to safe yield.

In other words, has any area successfully managed a basin's production by controlling demand and how did they do it? Are most well-run districts the result of adjudication? Can a watermaster be appointed absent a court order?

How can a locally-controlled district be formed that anticipates and can withstand the legal challenges certain to follow any attempt to meter, monitor and actually manage groundwater use?

A clear set of state level guidelines for district formation could avoid legal battles like the ones that engaged the Pajaro district for years.

The battle for a district to manage our Basin

Critical decisions about what structure will best manage our Basin to assure reasonable and equitable use of the resource for the long-term are being debated now.

The County is researching development of amendments to the existing groundwater management plan that will identify the powers and functions that the Groundwater Management District (GMD) will need to possess, a special study on legal entity options, and LAFCo findings and determinations. Since many GMDs have been formed with special legislation, developing an appropriate legal entity may also include the possibility of special legislation.

This research has led us into a confusing minefield of regulation and requirement within AB 3030 and SB 1938, in the eligibility requirements for state funding, in the eligibility requirements of the Department of Public Health and the Safe Drinking Water State Revolving

Fund, the 218 standards, formation and funding votes and how they are determined and weighted and LAFCo policies and procedures.

Meantime, adding another layer of confusion and unproductive conflict, a petition being circulated by a group of vineyard leaders called Paso Robles Agricultural Alliance for Groundwater Solutions (PRAAGS) supports formation of a California Water District (CWD) over a reduced area of the Basin. If formed, this district would be controlled by the large landowners. We are concerned that their proposed district would also be independent of County oversight and could become a barrier to adjudication should adjudication be necessary as a last resort. Their petition requires signatures from owners of 51% of the land within the proposed district. Over the Basin, 36 entities own enough land to validate a CWD petition. There are over 9,000 parcels over the Basin whose interests may not be well served by a CWD.

Any vote that is based and/or weighted upon acres, the ownership of acres, the assessed value of acres, or the benefits to be received by acres will favor the large landowners who are the current beneficiaries of pumping with no management.

An example of how a CWD controlled by large landowners could disenfranchise rural residents and farm workers dependent on wells is the Westlands Water District.

If the district board is elected by the large landowners, rural residents and farm workers without the money to access the legal system or the power to influence the political system will have no voice in the decisions controlling their water supply.

Adoption of an Interim Urgency Ordinance

The situation in our Basin is that some people are pumping so much water that other people now don't have any. Deep wells that fill and refill on-site irrigation ponds have the capacity to leave residential wells stranded and dry.

Responding to this threat to the water supply for 29 per cent of the County's population (just under 80,000 people) and pleas for help from local residents with dry and failing wells, The San Luis Obispo Tribune published an award-winning 5 part series titled "Wine and Water – How the Growth of the Wine Industry and Poor Resource Management are Threatening the North County".

With a timely and very effective letter dated August 20, Thomas Howard, Executive Director of the State Water Resources Control Board reminded the County Board of Supervisors that "California faces serious water resource challenges with growing demand and the uncertainty of climate change. Every source of potable water must be protected and managed to ensure long term stability.I believe you have the information to understand the threat to the public and the environment, and I urge you to take immediate action to stabilize the situation by approving the ordinance."

The Tribune's ongoing coverage and editorial support, the Water Board's attention, as well as wide media coverage including a segment on CBS news and articles in the LA Times, helped to bring about the County's adoption of an Interim Urgency Ordinance (UO) intended to give a two year "time-out" to a frenzy of new and deeper well permit applications and dry land conversions.

However, although it gives the appearance of action, this effort to limit new demands on the Basin may prove unenforceable.

In the main Basin, irrigated ag consumes 80% of the water pumped, therefore any good faith cooperation from growers could at least keep things from getting worse. However, response to the UO from the ag community has been mostly negative and will weaken its effectiveness. Examples include: requesting and receiving an exemption for ag ponds; requesting and receiving a change in the offset requirement from 2:1 to 1:1; the magnitude of acres requesting vested rights exemptions and a well-financed attack on the offset requirements and upon the UO itself. In September, applications were pending for seven new ag ponds totaling 255 acre-feet of capacity. Initial requests for exemption from the UO, if granted, will add 1,314 acres to the estimated 32,500 acres of vineyards over the basin already being irrigated.

We will continue to advocate for a plan that will meet and be consistent with California's established basin plan objectives designed to protect and maintain beneficial uses and the public trust.

Our comment on the other three key elements of groundwater management will follow. Thank you for the opportunity to participate in this critical groundwater project.

Sue Luft, President
Dianne Jackson, First Vice President
Maria Lorca, Second Vice President
CC Coats, Secretary
Jan Seals, Treasurer

cc: Central Coast Regional Water Quality Control Board
Ken Harris, Executive Officer Ken.Harris@waterboards.ca.gov
Lisa McCann Lisa.McCann@waterboards.ca.gov